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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/525,751

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Akihiro Iimura

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06/02/2009

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EXAMINER

TSAI, TSUNG YIN

ART UNIT

PAPER NUMBER

2624

MAIL DATE

DELIVERY MODE

06/02/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/525,751	Applicant(s) IIMURA ET AL.	
	Examiner TSUNG-YIN TSAI	Art Unit 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 December 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 February 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Acknowledge of **Amendment** received on 12/10/2008 and made of record.

Acknowledge of amendment to claim 3.

Acknowledge of no new IDS submitted.

Response to Arguments

Applicant's argument – Regarding pages 5-11 applicant's arguments.

Examiner's response – Applicant's arguments with respect to claims 1-4 have been considered but are moot in view of the new ground(s) of rejection.

35 USC 112 – Claim Rejection

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claim 3 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 3 recited "computer readable medium". However the specification as originally filed does not disclose any computer readable medium or defines what is considered to be a computer readable medium.

However, the specification does disclose in paragraph 0056 "computer readable memory stores". Examiner suggests amending claim 3 with "computer readable memory stores" to overcome the new matter rejection.

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1, recites on lines 5-6 cited "a horizontal plane" and on line 11 also recites "a horizontal plane". It is unclear whether these are the same "horizontal plane" or different from each other. Examiner suggests that "a horizontal plane" on line 11 changed to "the horizontal plane" if these planes are the same. If not, please amend to clarify.

As to claims 3-4 refer to claim 1 rejection.

35 USC 101 – Claim Rejection

3. 35 U.S.C. 101 reads as follows:

Art Unit: 2624

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1 and 2 are rejected under 35 U.S.C. 101 as not falling within one of the four statutory categories of invention. Supreme Court precedent and recent Federal Circuit decisions indicate that a statutory “process” under 35 U.S.C. 101 must (1) be tied to another statutory category (in particular, a machine), or (2) transform underlying subject matter (such as an article or material) to a different state or thing. While the instant claims recite a series of steps or acts to be performed, the claims neither transform underlying subject matter nor positively tie to another statutory category that accomplishes the claimed method steps, and therefore do not qualify as a statutory process.

The applicant has provided no explicit and deliberate definition of “obtaining”, “rotating”, “obtaining” and “operating” to limit the steps to a machine and the claim language itself is sufficiently broad to read on mental and manual process.

For example, the body of the claims may state that the steps are carried out by a processor. Note that in order for the “tied-to machine” prong of the test to be satisfied, a particular machine must be tied to a significant and meaningful step.

No transformation of matter is claimed. While the claim limitations can be interpreted to show manipulation of data, the data is not claimed to represent a real object in the real-world space, and the result of the manipulation is not claimed to be depicted in a human perceivable format.

Art Unit: 2624

Examiner suggests amending claim 1 so that the method is carried out and tied to a hardware or system. Please view the language of the specification to identify the proper term to amend the language of claim 1 to overcome the rejection.

35 USC 102 – Claim Rejection

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1 and 3-4 are rejected under 35 U.S.C. 102(b) as being unpatentable over Kosuke et al (Patent abstracts of Japan 63-299400, IDS).

(1) Regarding claim 1, similarly claims 3 and 4:

Kosuke et al teaches the following subject matter:

- obtaining a position data of the fiducial mark 1 by image-processing the fiducial mark 1

[Constitution discloses lead 3a and coordinates (X1, Y1) is seen as fiducial mark 1 and position data respectively];

- rotating the holding member holding the object to be held substantially by 180 degrees in a horizontal plane

[Purpose discloses mounting position (seen as holding member of IC); Constitution discloses rotation of nozzle by 180 degrees];

- obtaining a position data of the fiducial mark 2 by image-processing the fiducial mark 2 rotated by 180 degrees

[Constitution discloses lead 3b and coordinates (X2, Y2) is seen as fiducial mark 2 and position data respectively]; and

- operating, on the basis of the position data of the fiducial mark 1 and the fiducial mark 2 rotated by 180 degrees, an amount of position shift from a rotational center of the holding member to a center of the object to be held and an amount of angle shift of the object in a horizontal plane with respect to a fiducial line of the holding member

[Constitution discloses lead 3a and 3b and its position; Constitution discloses rotation 180 degrees; Purpose discloses correction of deviational amount; IC of rotation center with 180 degrees; coordinate X, Y are seen as horizontal plane with (X1, Y1) and (X2, Y2) fiducial point on the same plane; mounting position is seen as holding member].

35 USC 103 – Claim Rejection

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kosuke et al (Patent abstracts of Japan 63-299400, IDS) and Webb et al (UK 0010489.3, IDS).

(1) Regarding claim 2:

Kosuke et al teaches all the subject matter above.

Kosuke et al does not teach the following:

- wherein the object to be held is a head of a DNA micro-array preparing apparatus for arranging a number of spots on a substrate

However, Webb et al teaches:

- wherein the object to be held is a head of a DNA micro-array preparing apparatus for arranging a number of spots on a substrate

[Abstract discloses array with polynucleotide (or DNA) fluid droplets on substrate with target locations and dimensions].

It would have been obvious to one skill in the art at the time of the invention to modify Kosuke et al teachings by Webb et al in order to improve the quality of produced arrays by indicating errors which may arise from vibrations, equipment malfunctions or other factors as disclose in the abstract by Webb et al.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Magome et al (US 5,489,986) discloses position detecting apparatus.
- Nishi (US 5,243,195) discloses projection exposure apparatus having an off-axis alignment system and method of alignment therefore.

Art Unit: 2624

- Kocher (US 2003/0228697 A1) discloses micro-array calibration means.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TSUNG-YIN TSAI whose telephone number is (571)270-1671. The examiner can normally be reached on Monday - Friday 8 am - 5 pm ESP.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Samir Ahmed can be reached on (571)272-7413. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Tsung-Yin Tsai/

Examiner, Art Unit 2624

May 27, 2009

Application/Control Number: 10/525,751

Page 9

Art Unit: 2624

/Samir A. Ahmed/

Supervisory Patent Examiner, Art Unit 2624